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|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/817,902 | DIDERIKSEN ET AL. | |
| | Examiner | Art Unit | |
| | Miranda Le | 2167 | |

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to Amendment filed 12/30/04.
2. The allowed claim(s) is/are 1, 3, 5, 7, 9, 13, 14, 16-21, 23, 27, 29-31, 34, 35-38, now renumbered as 1-23.
3. The drawings filed on 03/26/01 are accepted by the Examiner.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application (PTO-152)
6. Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

Miranda Le
January 21, 2005

DETAILED ACTION

1. This communication is responsive to Amendment filed 12/30/2004. Claims 1, 3, 5, 7-9, 12-14, 16-21, 23, 27-31, 34-38 are pending in this application. Claims 1, 9, 13, 21, 23, 29, 31, 34, 35, 38 are independent claims. In the Amendment, claims 1, 3, 5, 9, 13, 21, 23, 31 have been amended, claims 2, 4, 6, 10, 11, 15, 22, 24-26, 32, 33 have been canceled, no claims have been added.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Lance R. Sadler on January 21, 2005.

3. The application has been amended as follows:

- Cancel claim 8.
- Claim 1 has been amended as:

A system for synchronizing visualization with audio samples comprising:
one or more audio sources configured to provide audio samples that are to be rendered by a media player;
an audio sample pre-processor communicatively linked with the one or more audio sources and configured to receive and pre-process audio samples before the

samples are rendered, the pre-processing providing characterizing data associated with each sample, wherein the characterizing data is derived from the audio samples, wherein said audio sample pre-processor comprises a Fast Fourier Transform that it utilizes to process the audio samples to provide frequency data associated with the audio samples, wherein the audio sample pre-processor comprises a timestamp module that provides a timestamp for each audio sample, each timestamp being maintained by a data structure associated with the audio sample, wherein the audio sample pre-processor is configured to:

query a media player audio sample renderer for a time associated with an audio sample that is being currently rendered, and
use the time to ascertain a timestamp of an associated audio sample, the audio sample pre-processor further being configured to provide characterizing data of the associated audio sample so that the characterizing data can be used to render the visualization;
one or more effects configured to receive the characterizing data and use the characterizing data to render a visualization that is synchronized with an audio sample that is being rendered by the media player; and
multiple data structures configured to hold the characterizing data, each data structure being associated with an audio sample.

- Cancel claim 12.
- Claim 9 has been amended as:

A media player comprising:

an audio sample pre-processor configured to receive and pre-process audio samples before the samples are rendered by the media player, the pre-processing providing frequency data associated with each sample, wherein the frequency data is derived from the audio samples, wherein the audio sample pre-processor pre-processes the audio samples by using a Fast Fourier Transform to provide the frequency data, wherein the audio sample pre-processor comprises a timestamp module that provides a timestamp for each audio sample, each timestamp being maintained by a data structure associated with the audio sample, and further wherein the audio sample pre-processor is configured to:

query a media player audio sample renderer for a time associated with an audio sample that is being currently rendered, and
use the time to ascertain a timestamp of an associated audio sample, the audio sample pre-processor further being configured to provide frequency data of the associated audio sample to the one or more effects so that the frequency data can be used to render the visualization;
one or more effects configured to receive the frequency data and use the frequency data to render a visualization that is synchronized with an audio sample that is being rendered by the media player; and
multiple data structures configured to hold the frequency data, each data structure being associated with an audio sample.

- Cancel claim 28.
- Claim 23 has been amended as:

A method of providing a visualization comprising:

receiving multiple audio samples;

pre-processing the audio samples before they are rendered by a media player renderer, the pre-processing deriving characterizing data for each sample, wherein said pre-processing comprises using a Fast Fourier Transform to provide frequency data associated with the samples, wherein the characterizing data comprises a timestamp associated with the audio sample, the timestamp being provided based upon when the audio sample is calculated to be rendered by the media player renderer;

maintaining characterizing data for each audio sample in a data structure associated with each audio sample;

determining when an audio sample is being rendered by the media player renderer, wherein said determining comprises:

ascertaining a time associated with a currently-rendered audio sample;

selecting a data structure having a timestamp that is nearest the time; and

providing characterizing data associated with the selected data structure to a component configured to provide the visualization; and

responsive to said determining, using the characterizing data that is associated with the audio sample that is being rendered to provide a visualization.

- Claim 35 has been amended as:

A method of providing a visualization comprising:

defining a frame rate at which visualization frames of a visualization are to be rendered, the visualization frames being rendered from characterizing data that is computed from audio sample and which is used to create the visualization,
wherein the characterizing data comprises frequency data associated with the audio samples and generated by pre-processing the audio samples using a Fast Fourier Transform;

setting a threshold associated with an amount of time that is to be spent rendering a visualization frame;

monitoring the time associated with rendering individual visualization frames;

determining whether a visualization frame rendering time exceeds the threshold; and

providing an effective frame rate for rendering visualization frames that is longer than the defined frame rate if the determined visualization frame rendering time exceeds the threshold.

- Claim 38 has been amended as:

set a threshold associated with an amount of time that is to be spent rendering a visualization frame for a given frame rate, said visualization frame being associated with a visualization that is rendered using characterizing data that is computed from audio samples, which characterizing data is used to create the visualization, wherein the characterizing data comprises frequency data

associated with the audio samples and generated by pre-processing the audio samples using a Fast Fourier Transform;

monitor the time associated with rendering individual visualization frames;

determine whether a visualization frame rendering time exceeds the threshold;

provide an effective frame rate for rendering the visualization that is longer than the defined frame rate if the determined visualization frame rendering time exceeds the threshold.

Reasons for Allowance

4. Claims 1, 3, 5, 7, 9, 13-14, 16-21, 23, 27, 29-31, 34-38 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a method of providing a visualization wherein visualizations are synchronized with an audio stream using a technique that builds and maintains various data structures.

Claims 1, 9, 13, 21, 23, 29, 31, 34, 35, 38 identify the uniquely distinct step of: said audio sample pre-processor comprises a Fast Fourier Transform that it utilizes to process the audio samples to provide frequency data associated with the audio samples; and the audio sample pre-processor comprises a timestamp module that provides a timestamp for each audio sample, each timestamp being maintained by a data structure

associated with the audio sample, wherein the audio sample pre-processor is configured to:

query a media player audio sample renderer for a time associated with an audio sample that is being currently rendered,

use the time to ascertain a timestamp of an associated audio sample,

characterize data of the associated audio sample so that the characterizing data can be used to render the visualization, and

multiple data structures configured to hold the characterizing data, each data structure being associated with an audio sample.

In contrast, the closest prior arts, Leeke et al. (US Patent 6,587,127 B1) discloses a substantially similar method in which a server interacts with users to provide an Internet-based digital audio service that combines an audio player interface with audio content; and Chang et al. (US Patent 6,715,126 B1) similarly describes a method for delivering a presentation of web content (e.g. audio, video content) in streaming fashion, having defined time increments, together with one or more content sources such as images or events, synchronized so that the one or more others images or events are displayed at predetermined time increments in the media presentation. However, both Leeke and Chang fail to anticipate or render the above-cited limitations obvious.

Thus, prior art of record neither renders obvious nor anticipates the combination of claim elements in light of the specification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

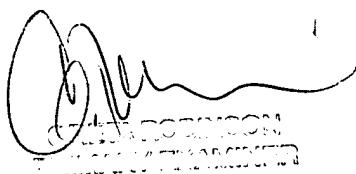
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (571) 272-4107. The fax number to this Art Unit is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Miranda Le
January 21, 2005



The seal is circular with a stylized "O" shape on the left. The text "U.S. PATENT AND TRADEMARK OFFICE" is curved along the top inner edge, and "U.S. DEPARTMENT OF COMMERCE" is curved along the bottom inner edge. In the center, it says "DIGITAL SIGNATURE" above "JOHN D. ORRISON, CHIEF EXAMINER".